Introduction

Like many household products, paint is made up of chemicals and can be hazardous if not used properly. Paint is a blend of pigments for color, resins for binding power and other additives dissolved in solvents. Painting requires a few common sense precautions, as simple as turning off the electricity to fix a light switch.

Paint Categories

Paints are classified into two basic categories: **latex** and **solvent-based**.

Latex paints are *water-based* and can be identified by such words as "clean with soap and water", "latex", "vinyl", "acrylic", or "water- based."

Solvent-based paints are *oil-based* and may have the words "alkyd", "urethane", "epoxy", "varnish", "clean with mineral spirits or paint thinner", "contains petroleum distillates", or "combustible: keep away from heat and flame." While over the years paint manufacturers have found substitutes for some of the potentially hazardous ingredients in paints, organic solvents are still a necessary ingredient in paints where a high gloss or hard wearing finish is desired, such as kitchens and bathrooms. Solvents are used to dissolve and /or disperse paint ingredients and overexposure to solvents can have toxic health effects.

The Dangers

Both water-based and oil-based paints can have high heavy metal concentrations and volatile organic compounds (VOC's). Water-based paints will typically have lower VOC levels. VOC's are organic gases which are given off by any surface that was painted, stained or varnished. These gases can cause headaches, eye/skin irritation, nosebleeds, sinus problems, dizziness, fatigue and cancer.

The heavy metals in paint include **mercury** which was used as a biocide in paint up until 1991, when it was *banned* from use in *interior* water-based paints and voluntarily withdrawn from use by the industry in exterior water-based paints; however, *mercury-containing biocides are still allowed in exterior water-based paints*. A good rule of thumb here is **don't use exterior paint indoors**.

Another heavy metal in paint is **lead**. Lead was used extensively in paint as a pigment stabilizer until 1978 when it was discovered that it poses a significant health risk. The amount of lead allowed in paint for residential use was limited to .06% or less; hence even "*lead-free" paint can contain a small amount of lead*. Lead paint has not been banned from use altogether and is still used extensively for industrial surfaces. For more information on the dangers of lead from paint in place, refer to the telephone numbers at the end of this pamphlet.

Oil-based paints contain toxic pigments, ethylene, aliphatic hydrocarbons and fungicides and can cause serious side effects such as skin, eye, nose and throat irritation, as well as dizziness, headache and nausea. Prolonged exposure via inhalation may lead to liver, kidney or respiratory damage, nervous-system disorders, birth defects and possibly cancer.
Furthermore, oil-based paints are extremely flammable, whereas water-based paints are not.

Reduce Your Risk

When working with oil-based paints, you will see the words: "Warning Flammable" or "Caution Combustible" on the label. It is important to take the following precautions when working with oil-based paints:

- Open all windows and doors to create ventilation and disperse fumes. Fans are not recommended because unless specially constructed, they can create sparks.
- Eliminate all sources of flame, sparks and ignition. Put out pilot lights by turning off the gas and do not relight until well after the room is free of fumes.
- Don't smoke while working with oil-based paint or paint products.
- Don't use electrical equipment which may spark when working with oil-based paints.
- Make sure light bulbs are not exposed to sudden breakage as this may cause a fire.
- Clean up all spills promptly. Insure safe disposal of spilled waste and solvent saturated clean-up materials.
- Keep paint containers closed when not in use.

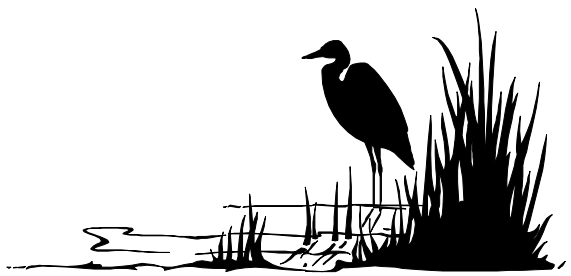
Safe Use

Minimize the hazards of painting by using these simple, common sense practices:

- Open all doors and windows to get ventilation and to disperse fumes. Do not use oil-based paints in deep basements, as solvent fumes can accumulate near the floor and are difficult to remove.
- If your eyes water or you begin to feel dizzy or nauseous, leave the work area immediately and get plenty of fresh air. If discomfort persists or breathing difficulties occur, get medical help.
- If you cannot get enough ventilation in the work area, use a respirator. A respirator is a breathing device designed to clean the air you breathe. There are many different types, but for oil-based paints, make sure the respirator is labeled "NIOSH/MSHA Approved for Organic Vapors." **You must first be trained before using a respirator**.
- Keep containers closed when not using them.
- Protect children and pets from exposure to paint and paint fumes.
- Wear butyl rubber gloves. Not only will this protect the skin, it will make clean-up easier.
- Wear splash goggles.
- If you get oil-based paint on your skin, wash it off immediately with plenty of soap and water.
- If you get oil-based paint in your eyes, flush the eyes with cold water for fifteen minutes and obtain medical treatment.

Paint Related Products

Paint thinners and turpentine are unnecessary if



water-based paint is used; however, if you do choose to use these products, remember that thinners and turpentine are reusable simply by filtering out the sediment (a coffee filter works well), or by allowing the particles to settle and pouring off the clear liquid. Remember, however, that these products are extremely toxic and flammable. A less toxic alternative would be water and water-based paint.

Paint Strippers are either solvent, water or citrus based. The solvent and water-based products may contain methylene chloride which is extremely toxic and a known carcinogen. If you do choose to use these products, always follow the label directions *precisely* and provide adequate ventilation. Less toxic alternatives include sandpaper, a heat gun, good old fashioned elbow grease, or a non-toxic, water-based or citrus-based paint remover.

Stains and finishes are also toxic and flammable / combustible. A less toxic alternative would be latex paint or natural earth pigment finishes.

Wood Preservatives may contain creosote or arsenic compounds. These are known cancer causers, extremely toxic and flammable. DO NOT USE products containing pentachlorophenol, creosote or arsenic. A less toxic alternative would be a water-based wood preservative or rot-resistant wood.

Safe Storage

Solvent-based paints and many paint related products are flammable or combustible and require special storage procedures. Always follow label directions for storage and make sure containers are tightly sealed. *Do not* store near heat sources such as furnaces, water heaters or space heaters. If only a small amount of the product remains, it is best to dispose of it rather than store it.

Equipment Cleanup

Never clean brushes or rinse paint containers into the street, gutter or storm drain.

- For water-based paints, paint out brushes to the fullest extent possible and rinse to the sanitary sewer.
- For oil-based paints, paint out brushes to the fullest extent possible, filter and reuse thinners and solvents.
- After painting out brushes on newspaper, allow paper to dry and dispose of as trash.

Safe Disposal

The **City of Albuquerque has a Reuse Center available through Rinchem, Inc. at 6133 Edith Blvd. NE**. The Reuse Center is only for **residential customers of the City of Albuquerque or Bernalillo County** who wish to dispose of *usable or unusable* paint and paint products, or who need some of these products for their own use. Donated paint is also reblended and sold under the name of **Enviro-Blend.** The Reuse Center is *free*. For more information call **Rinchem, Inc. at 345-1650** for a recorded message**.**

Information Resources

Waste Minimization &
Pollution Prevention Info.---------- 873-7004
Visit our web page for tips at:
http://www.cabq.gov/sewer
Albuquerque Environmental Health Department,
Hazardous Waste Assistance Program-------- 768-2600
Recycling Information---------- 761-8176
National Lead Information Center
To request information packet: 800-LEAD-FYI
To ask questions:----------800-424-LEAD
New Mexico Lead Hotline----------505-827-3709
TTY usersNM Relay ----------800-659-8331

Sources

Websites:
PPG Paint School
Paint and Paint Stripping Myths
Green Star General Store
Kellco's excerpt from *The Lead Primer*
University of Nebraska
Massachutses Water Resources Authority

Safe Handling and Disposal of Paint Products for Household Uses

Pollution Prevention Program
Wastewater Utility Division
City of Albuquerque